

### **REMARKS**

Citations to Applicant's specification herein are made with reference to the application as published in the PCT WO 2005/077151 A1.

### **Interview Summary**

The interview summary of 22 February 2008 is correct. No particular claims or prior art were discussed. No exhibits were discussed.

### **Drawings**

The Action objects to the drawings, asserting that the feature "the radius of the rotor varies round the circumference" is not shown. Fig. 2A has been amended to call out radii of  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$  and the specification has been amended accordingly. These amendments are supported by the original specification/drawings. *See, e.g.*, page 5, line 32-34, original claim 5. As such, these amendments do not introduce new matter.

### **§112 Rejections**

Claims 1,2, 9-15, 17-18 stand rejected under §112, ¶2 for the use of "they" and an alleged lack of clarity regarding the "slots". Per the Examiner's suggestion, "they" in claim 1 has been replaced with "said cutting tips," without narrowing the scope thereof. Further, the recitation of the "slot" in the tooth has been removed from claim 6, thereby resolving any potential §112 clarity issue regarding the "slot" in claims 9-15. Withdrawal of the §112 rejections are therefore requested.

**Improper Final Rejection**

Applicant requests withdrawal of the finality of the Action on two grounds.

First, Applicant requests withdrawal of the finality of the Action because the Action completely fails to address pending claim 3. The Action appears to treat claim 3 as canceled. However, neither the filed Preliminary Amendment nor the Response of November 2007 canceled claim 3. As such, claim 3 appears to be still pending, but not rejected in any way. Clarification on this point, and withdrawal of the finality, is requested.

Second, Applicant requests withdrawal of the finality of the Action because no prior amendment to claim 6 necessitated any new grounds of rejection. The Action was deemed final because "Applicant's amendment necessitated the new ground(s) of rejection." However this is incorrect. Claim 6, while amended to be in independent form, was not amended in any fashion that would necessitate new grounds of rejection. Prior to the Action of July 2007, claim 6 was a dependent claim that depended directly from independent claim 4. In the Action of July 2007, claim 6 was indicated as being directed to allowable subject matter if §112 rejections were overcome. As such, claim 6 was amended to be in independent form and to address the §112 issue(s). Applicant respectfully challenges the Examiner to **specifically identify the exact claim language** present in claim 6 as amended by the Response of November 2007 that **allegedly necessitated the new grounds of rejection**. In order to facilitate this task, the claim 6 as amended by the Response of November 2007 is reprinted below. Absent such a showing, Applicant submits that **the MPEP requires that the finality of the Action be withdrawn**.

6. A tree stump grinding unit adapted for use with a tree stump grinding machine, the unit comprising:
- a polygonal rotor having a rim around which a plurality of slots are provided;
  - a plurality of teeth, each tooth comprising:
    - a main body including a slot comprising two substantially planar surfaces engaged with a respective slot in the rotor,
    - at least one cutting face connected to and extending away from the main body;
    - wherein a force applied to the tooth in the plane of the rotor is transferred from the tooth to the rotor via one of the planar surfaces; and
    - wherein the cutting face includes at least two tips which are perpendicular to each other; and
  - fixing means for retaining each tooth in a corresponding slot in the rotor.

### **§102 Rejections**

Claims 1-2 and 16-18 stand rejected under §102 over Heckenhauer. Applicant respectfully requests reconsideration.

Claim 1 requires, *inter alia*, that the "cutting face include[] at least two cutting tips which are oriented generally perpendicular to each other such that the cutting tips cut in orthogonal directions simultaneously when said tooth is rotated about an axis spaced from said tooth."

Applicant notes that Fig. 9 of Heckenhauer shows a bit 40 with four cutting tips 41a, 41b, 41c, 41d that are configured in a symmetrical cross pattern. However, it would appear that only one of these teeth cut at any given time, not two orthogonal tips at one time. Heckenhauer contemplates that the bit is "indexed in it holder to position a new tip in cutting position when a

previous one wears out or breaks," col. 1, lines 4-7. There is no indication anywhere in Heckenhauer that more than one cutting tip of the same bit cuts simultaneously, as claimed by independent claim 1. Accordingly, Applicant submits that Heckenhauer does not show a "cutting face include[ing] at least two cutting tips which are oriented generally perpendicular to each other such that the cutting tips cut in orthogonal directions simultaneously," as claimed, and therefore cannot anticipate claim 1.

And, because Heckenhauer fails to anticipate independent claim 1, it cannot anticipate corresponding dependent claims 2 and 16-18.

With further regard to dependent claim 2, this claim requires that the tooth main body comprise a channel therein. On this point, the Examiner points to a portion of the bit 20 of Heckenhauer Fig. 5. However, in making the rejection of corresponding independent claim 1, the Examiner points to the bit 20 of Heckenhauer Fig. 9 in order to allegedly show the claimed "planar surfaces disposed so as to face in generally opposite directions." The embodiments of the bit in Heckenhauer Fig. 5 and Fig. 9 are two different embodiments, not different views of the same embodiment. Thus, it is clear that the rejection of claim 2 requires that two different embodiments of Heckenhauer be combined. Such a rejection is improper for at least two reasons. First, the rejection is a §102 anticipation rejection, which does not allow different embodiments to be combined. Second, the use of the 4-way cross-like design of Heckenhauer Fig. 9 precludes the use of the alleged slot 24 due to the need for 4-way symmetry. As such, a combination of the embodiments of Heckenhauer Fig. 5 and Fig. 9 would either be missing the claimed "planar surfaces" or the claimed "channel." Either way, the combination fails to teach each and every limitation of claim 2.

With further regard to dependent claim 18, this claim requires that "said substantially planar surfaces [of the main body] are disposed generally parallel to said cutting face." Also, as required via claim 1, the cutting face is required to "include[]" at least two cutting tips which are

oriented generally perpendicular to each other." The Examiner asserts that Heckenhauer Fig. 9 shows the claimed two substantially planar surfaces. Initially, it is unclear what surfaces the Examiner is referring to in Fig. 9. However, because the planar surfaces are required to be "disposed so as to face in generally opposite directions," Applicant must *assume* that the Examiner is referring to the left/right sides of each of the four arms that end in cutting tips 41a, 41b, 41c, 41d.<sup>1</sup> These sides are the only apparent sides that face in generally opposite directions. However, these sides are oriented in a direction that is perpendicular to the cutting face, not generally parallel. With reference to Fig. 9, the left/right sides of each of the four arms form planes (assuming *arguendo* that they are substantially planar) that extend into/out of the plane of the paper. In contrast, the cutting face, defined with reference to the claimed "at least two cutting tips" is in the plane of the paper. Thus, the alleged "substantially planar surfaces" in Heckenhauer are perpendicular to the cutting face, not "substantially parallel," as claimed. Accordingly, Heckenhauer cannot anticipate claim 18.

Dependent claim 19 has been added. Claim 19 requires, *inter alia*, that "said cutting face is disposed generally parallel to at least one of said substantially planar surfaces." Such an arrangement is shown, e.g., in Applicant's Fig. 9 and accompanying text. Accordingly, claim 19 does not introduce new matter. Applicant submits that claim 19 defines patentable subject matter over the cited art for reasons similar to those expressed above with regard to dependent claim 18.

Independent claim 4 stands rejected under §102 over Heckenhauer. Claim 4 requires, *inter alia*, that the teeth include a main body that includes "two substantially planar surfaces disposed so as to face in generally opposite directions." For these "planar surfaces" the examiner points to the sidewalls of the shank 22 on Heckenhauer in Fig. 5. While the view of

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<sup>1</sup> If the Examiner is asserting some other surfaces of Heckenhauer Fig. 9 are the claimed "substantially planar surfaces," the Examiner is requested pursuant to MPEP §706.07 to specifically identify which surfaces are relied on, preferably with an annotated drawing, in the next communication.

Fig. 5 shows the relevant surface as a straight line, Fig. 7 of Heckenhauer plainly shows that surface 22 is distinctly arcuate in shape, not substantially planar. Thus, surface 22 does not meet the limitation of being a "substantially planar surface." And, there is no other alternative surfaces in Heckenhauer that would appear to be relevant. As such, Applicant submits that Heckenhauer does not teach each and every limitation of claim 4, and therefore cannot anticipate the same.

### **§103 Rejections**

Dependent claim 5 stands rejected under §103 over Heckenhauer. Claim 5 depends from claim 4 and requires, *inter alia*, "wherein the radius of the rotor varies around the circumference." The Examiner asserts that such would have been obvious "because determining the optimal value of a result effective value ... involves only routine skill in the art." However, the only relied-on reference, Heckenhauer, appears to disclose only that the rotor should have a constant radius, not one that varies. While it may be obvious to choose the "result effective value" of a constant radius (e.g., all R= 4 feet, or all R=3 feet), such does not render obvious making the leap from a rotor with a constant uniform radius to a rotor with a varied non-uniform radius. Just as a teaching of symmetry does not suggest asymmetry, a teaching of constant does not suggest varied. Thus, the use of a rotor with a "radius that varies around the circumference" is much more than merely "determining the optimal value of a result effective value," and the resulting rejection must fail.

Note that claim 5 has been amended to address the antecedent basis issues raised by the Examiner, without narrowing the scope thereof.

said slots extending generally radially inward relative to a rotational center of said rotor

Independent claim 6 stands rejected under §103 over Heckenhauer. Independent claim 6 requires, *inter alia*, that the slots in the rim of the rotor be "extending generally radially inward

relative to a rotational center of said rotor," that is, extending in a direction that is generally towards the middle of the rotor. In contrast, the putative slots in Heckenhauer -- presumably the bores of the tapered sockets 14<sup>2</sup> -- are plainly oriented generally tangentially to the rim of the rotor. Such an orientation simply cannot be considered as being "inwardly extending," as claimed, much less "generally radially inward" relative to the rotor's center of rotation. Claim 6 further requires that the force transfer from the tooth to the rotor be "via one of the planar surfaces, with the force transfer at that planar surface oriented generally normal to that planar surface." Such an arrangement is discussed, e.g., in the first full paragraph on page 6 of the specification. Thus, in the embodiment of claim 6, the tangentially applied force on a tooth (such as the counter-rotational force encountered when cutting) is transferred from the tooth to the rotor by the planar surface in a pressing fashion, not in a shear fashion. In contrast, the transfer of the relevant forces in Heckenhauer via the putative planar surfaces 22 (as identified by the Examiner) are clearly via a shear action that is generally parallel to the planar surface, not generally normal thereto. In view of these fundamental differences, Applicant submits that Heckenhauer simply cannot render obvious the subject matter of claim 6.

In addition, claim 6 requires "fixing means for retaining each tooth in a corresponding slot in the rotor." This limitation is expressed in §112, ¶6 means-plus-function form. The rejection points to Fig. 3 of Heckenhauer, but does not apply the analysis under §112, ¶6 as legally required by *In re Donaldson*. MPEP §2181. In Applicant's specification, the "fixing means" is described as a bolt and nut (page 3, lines 4-5); a fixing bolt (page 5, lines 29-31; page 7, lines 25-27); a keeper plate and bolt (page 7, line 32 to page 8, line 22). In contrast, Heckenhauer appears to rely entirely upon friction to hold the bit 20 in place, with the friction brought on by hammering the bit 20 into place (col. 3, lines 19-30). Applicant submits that such

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<sup>2</sup> The Examiner is requested, if the rejection is maintained, to specifically identify the putative rotor slots in Heckenhauer with specific reference to a reference number and/or an annotated illustration. Such is required in order to clarify an issue for appeal pursuant to MPEP §706.07.

an arrangement is not the structural equivalent of the claimed "fixing means." As such, Applicant submits that for this additional reason Heckenhauer simply cannot render obvious the subject matter of claim 6.

And, because Heckenhauer fails to render obvious independent claim 6, it cannot render obvious corresponding dependent claims 7-15.

For the forgoing reasons, Applicant submits that the present application is in condition for allowance and notice to such effect is respectfully requested. However, if any additional issues remain, the Examiner is encouraged to telephone the undersigned so that they may be expeditiously resolved.

Respectfully submitted,  
COATS & BENNETT, P.L.L.C.



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